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Basal cell carcinomata: Risk factors for incomplete excision and results of re-excision

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KEYWORDS
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Summary *Introduction:* Re-excision of incompletely excised basal cell carcinomas (BCCs) can be unsatisfactory in the absence of residual tumours. Recommended guidelines do suggest re-excision as a treatment modality; however, its value has been questioned due to low or variable residual tumour presence. We analysed the incomplete excision and re-excision rates and the presence of residual tumours over an 18-month period in a single unit.
Method: Using pathology results and case notes, 2586 primary excisions of BCCs in 1717 patients were reviewed.
Results: The incomplete excision rate was reported to be 7.1% (184/2586). Excision of a lesion by multiple excision lesion procedure was associated with a higher rate of incomplete excision when compared to single lesion excision procedure (61.5% vs. 38.5%). Of the incompletely excised BCCs, 33.6% (62/184) were re-excised, of which 62.9% (39/62) had residual tumours. Although the figures are small, most anatomical sites examined had a residual tumour presence >50%.
Conclusion: After evaluating each patient individually, considering the high residual tumour rate, re-excision of an incompletely excised BCC would be a worthwhile procedure.

Introduction

Basal cell carcinomas (BCCs) are the most common cutaneous skin cancers in Europe.[1] Management usually involves surgical excision, photodynamic therapy (PDT), curettage, or immunomodulators, or a combination.[2] Surgical excision is highly effective.[3,4] The recurrence rate is <2% with

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regard to complete excision.[3] Incomplete excisions in most centres vary between 4.7% and 12%.[5–8] The recurrence rate of incompletely excised BCC at 5-year follow-up varies between 30% and 41%.[9–11]

Clinicians face a management dilemma when a report states incomplete excision post surgical excision of a primary BCC. The decision to reoperate or watch and wait can be difficult. Retreatment of incompletely excised BCCs is recommended, particularly when deep margins are involved[2,6,10,12] and with surgery as the preferred method.[2] In practice, the rate of re-excision of incompletely excised carcinoma varies between 30% and 75%.[6,10,13] When re-excised, the presence of residual tumour in two units was found to be 41% and 54% of cases.[6,14]

We aim to evaluate the rate of incomplete excision, rate of re-excision, and rate of residual tumour present in the re-excised samples in our unit.

Materials and method

A retrospective review of 2586 consecutive primary excisions of BCCs in 1717 patients was performed. The BCCs were excised by consultants and specialist registrars over an 18-month period from April 2009 at Queen Victoria Hospital. Data were compiled from histopathological reports obtained from hospital computer database system. Specimens were considered incompletely excised if the reports stated that the tumour extended to the margins, that is, <0.5 mm with focal extension, or is likely to recur. However, tumours with margins of 0.5 mm were not considered incompletely excised unless there was focal extension or if the report stated that the tumour is likely to recur. This is because the majority of areas such as nose had 0.5-mm margins. The specimens were reported by consultant pathologists throughout this period.

Clinical variables noted were site, histology, and the margins involved and also whether the BCCs were removed via multiple lesion or single excision procedure. The presence of residual tumour was noted in the incompletely excised specimens that were re-excised. In cases where the histopathology laboratory had not received by 6 months incompletely excised specimens re-excised following primary excision, it was assumed that re-excision had not been performed.

Statistical analysis was performed using the SPSS software version 17.0.

Results

Of the 2586 excised primary BCCs, 184 (7.1%) were incompletely excised. Of the incompletely excised BCCs, 62 (33.6%) had been re-excised. Residual tumour was found in 62.9% (39/62) of the re-excised samples.

Multiple BCC excisions versus single BCC excision

An average of 1.5 BCCs per patient was noted following excision of 2586 BCCs from 1717 patients.

During initial excision of the primary BCC, BCCs were removed in a theatre procedure involving multiple excisions of lesions in 39.1% (1011/2586) of the patients, while 60.9% (1575/2586) patients underwent single lesion excision. In the incompletely excised group, 61% were excised via a multiple lesion excision procedure at initial excision (Table 1). Incomplete excision is more likely if the initial excision was performed via a multiple lesion excision procedure (Figure 1). This is significant at $p < 0.001$ (chi-squared, $X^2 = 38.35$). Therefore, removal of multiple BCCs in a procedure is associated with a higher incomplete excision rate.

Table 1 Multiple BCC excision versus single BCC excision.

	Initial excision	Incomplete
Multiple case procedure	1011 (39.1%)	113 (61.5%)
Single case procedure	1575 (60.9%)	71 (38.5%)
Total	2586(100%)	184 (100%)

Margin involvement

Regarding the incompletely excised samples, the lateral margins had the highest involvement in 51.6% (95/184), deep margins in 33.6% (62/184), and both margins in 14.7% (27/184; Table 2). This is significant with chi-square value at $p < 0.01$ ($X^2 = 37.7$). The rate of re-excision was 38.7% (24/62) and 40.7% (11/27) while involving deep margins and both lateral and deep margins, respectively. Of the lateral margins, 28.4% (27/95) were re-excised. Regarding margin involvement, no statistical significance was observed with respect to the differences in the decision to re-excise (chi-squared, $X^2 = 1.63$ at $p > 0.05$).

The presence of residual tumour was noted in re-excised lesions involving lateral margins at initial excision in 18/27 cases, involving deep incomplete excisions in 15/24 cases, and with both margins involved in 6/11 cases. There was no statistical difference in these proportions ($X^2 = 0.177$ at $P > 0.05$).

Site distribution

There were 184 incompletely excised BCCs. The majority of these were nose ($n = 48$), orbital ($n = 22$) and temple

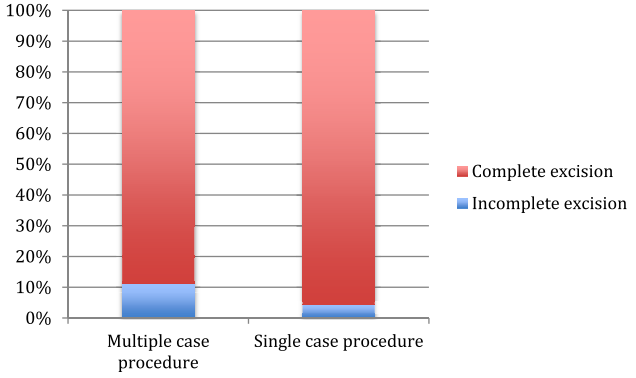

Figure 1 Rate of incomplete excision relative to procedure type.